PeakDetection.mlx test data sets: all with 3 peaks with heights 1, 2, 3, equal areas (10.645). Peak detector positions and widths used as first-guess starting point for curve fitting.

equalareas.csv: Check for accuracy with easy case. Peaks Gaussian, well separated, little noise

3

Peak dete			,		Gaussian, wei	•
	Peak	Position	Peak-valley	Perp drop	Tan skim	
	1.0000	20.0000	0.9784	10.6442	10.6427	
	2.0000	50.0000	1.8397	10.6447	10.6437	
	3.0000	79.9998	2.5185	10.6447	10.6444	
2.5		Smo	oothed signal			
2.5						
2				ß		
-				//		
			0			
1.5			/1			
			/ \			
			/ \			
1	1					
	//	\				
	/	\				
0.5	/				-	
0						
-0.5 L 0	10 20	30 40	50 60	70 80 90) 100	
			of peaks detected:			
	nea		9.9 No baseline			
3 -	, ,	, , , ,	1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	'		
				A		
82-				#1		
9 2 - + mode +			Λ	# 1]	
+			$-I\Lambda$	f t		
1			$I \Lambda$	I 1	1	
			/ \	/ / A		
0 -	10 20	30 40	50 60	70 80 9	90	
Peaks				rror = 0.323% R		
			Single fit			
	Peak#	Position I	Height Width	Area		
0.02	1	20.01		10.71]	
0.01	2	50 2 80	1.002 10.04 2.003 5.006 3.001 3.328	10.71 10.67 10.63	,	
0	Not bear	80	3.328	10.63		
42		208838			A 4	
-0.01		લેક્ટ ભૂતિ છ	· · · · · · · · · · · · · · · · · · ·		n 4	
-0.02		. 1917	10 PM			
	10 20	20 40	F0 60	70 00 /		
	10 20	30 40	50 60 Residual Plot	70 80 9	90	
PeakShane	e=Gaussia		ing error=0.	32266%	R2= 0.99974	
- a	peak #	Positi	_		idth	Area
	1	20.005	_		10.041	10.705
	2	50.004			5.0065	10.674
	_					

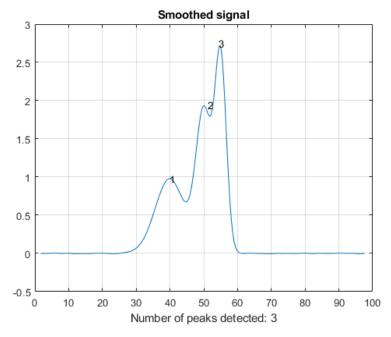
79.999 3.0013 3.3278

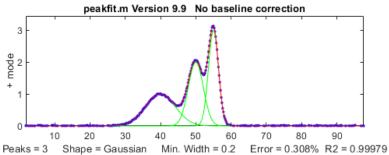
10.632

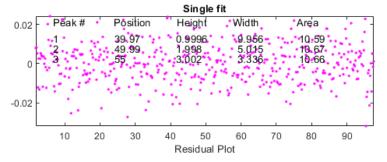
ThreePeakOverlap.csv: Peaks Gaussian, highly overlapped, very little noise

Peak detector: PeaksAboveThreshold

peak #	Position	Height	Width	Area
1.0000	39.9729	0.9765	10.4374	10.8505
2.0000	51.2645	1.9512	10.1134	21.0075
3.0000	54.4150	2.7585	4.8471	14.2342





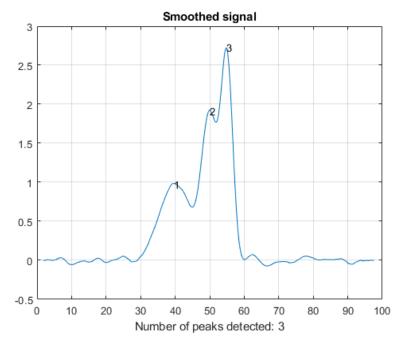


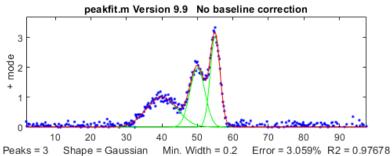
PeakShape=Ga	ussian	Fitting err	or=0.30797	% R2=	0.99979
peak #	Position	Height	Width	Area	
1.0000	39.9661	0.9996	9.9561	10.5933	
2.0000	49.9901	1.9983	5.0153	10.6680	
3.0000	54.9986	3.0019	3.3359	10.6594	

ThreePeakOverlapNoisy.csv: Peaks Gaussian, highly overlapped, x10 noise

Peak detector: PeaksAboveThreshold

peak #	Position	Height	Width	Area
1.0000	39.6605	0.9831	11.4306	11.9631
2.0000	50.0965	1.9147	7.9974	16.3017
3.0000	54.7605	2.7312	4.3836	12.7460





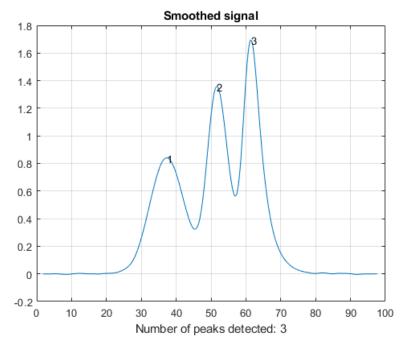
Single fit										
	Peak#	<u>'</u>	Position	' He	ight	Width	'	Area		
0.2	1 2 3	1,00	39.97 50.01 55	1.9)16)89)42	10.2 4.959 3.250		11.03 10.5 10.55		
-0.2	· .	Α.	See			11. 7	Q - 7	• • •	11.00	
L	;		<u> </u>							
	10	20	30	40	50	60	70	80	90	
	Residual Plot									

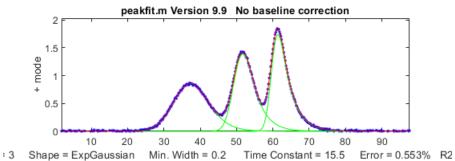
PeakShape=Ga	ussian F	itting err	cor=3.0587%	R2 = 0.976	578
peak #	Position	Height	Width	Area	
1.0000	39.9720	1.0159	10.2041	11.0346	
2.0000	50.0109	1.9890	4.9588	10.4989	
3.0000	55.0029	3.0420	3.2579	10.5493	

threeEMGoverlap.csv: Peaks exponentially-broadened Gaussian, highly overlapped, little noise

Peak detector: PeaksAboveThreshold

peak #	Position	Height	Width	Area
1.0000	37.2966	0.8401	11.9708	10.7067
2.0000	51.7048	1.3574	7.1696	10.3606
3.0000	61.4408	1.6927	5.8351	10.5150



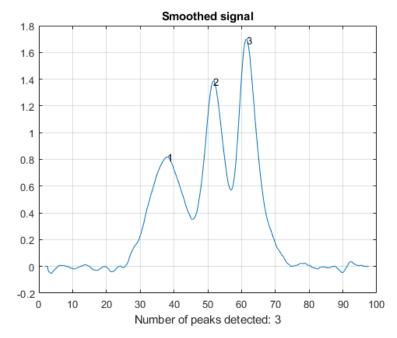


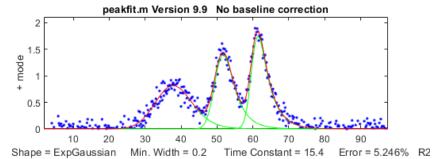
				Sing	gle fit				
	Peak#	Pos	ition	Heigh	ıt	Width	΄ Δ	rea	_
0.02	1 2 3	34.9 49.9 59.9	96	1.006 2.04 3.087		9.965 4.913 3.251	1.0	10.68 10.67 10.68	
-0.02				•		7.77		•	• -
	•							•	
	10	20 :	30 4	n ,	50	60	70	80	90
	.0	20	30 4		ual Plo		70	00	50

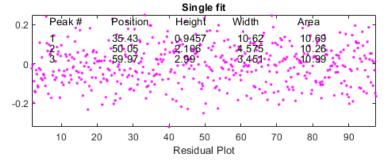
PeakShape=Exp. broadened Gaussian R2 = 0.99951Fitting error=0.55273% Height peak # Position Width Area 1.0000 34.9459 1.0064 9.9654 10.6754 2.0000 49.9604 2.0398 4.9133 10.6686 3.0000 59.9762 3.0872 3.2508 10.6827

Peak detector: PeaksAboveThreshold

peak #	Position	Height	Width	Area
1.0000	37.9556	0.8181	9.4550	8.2348
2.0000	51.6973	1.3839	6.5445	9.6418
3.0000	61.4276	1.6969	6.0219	10.8787







2.9905

3.0000

59.9721

Fitting error=5.2461% R2 = 0.95613PeakShape=Exp. broadened Gaussian Width peak # Position Height Area 1.0000 35.4276 0.9457 10.6157 10.6861 2.0000 50.0539 2.1062 4.5752 10.2577

3.4511

10.9856